

2nd Sub.  
Spec Disapproved  
for Entry C. Cooley 20 Aug 2004



UPDATED RIDER SPEC.-CLN TO SPECIFICATION AMENDMENT OF EXAMINED USSN 10/042,678

### UPSTREAM PNEUMATIC VISCO SEAL ASSEMBLY

This is an examinable patent application under Section 111(a) submitted for a formal filing receipt. This is a continuation-in-part of my copending provisional specification of Nov. 7, 2000, accorded USSN 09/707,208, now U.S. Letters Patent US 6,390,666B1, granted May 21, 2002.

#### FIELD OF THE INVENTION

The present invention lies in the field of helical bladed, rotors and their sealing assemblies on the drive end of the rotors serving as continuous mixers for plastic materials.

#### BACKGROUND OF THE INVENTION

The present invention relates to the operating problems encountered with sealing arrangements for a rotatable shaft, like a helical rotor. During rotor turning, a sealing pressure is built up and maintained in the molten materials as enclosed within the annular clearances provided between the rotors and the surrounding barrel by means of the helical ridges moving within the mixer. The current practice for a drive end journal, or rotor pilot component, requires a packing gland seal means to effect a compression on the packing component itself, so that its seals against an outer wear sleeve. The currently accepted sealing means is effective for only a relatively short time. This occurs because the particulate feed materials, and in their thermoplastic forms, work their way into the seal assembly itself. This then serves to harden the packing component, eventually to the extent that it appreciably stiffens, and the packing will no longer seat tightly against the wear sleeve. The positive air pressure in the mixer will cause the leaking of particulates to flow through the impaired sealing means, creating mixer site